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PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 09/866,861
Filing Date: May 29, 2001
Applicant: INOUE
Group Art Unit: Not yet assigned
Examiner: Not yet assigned
Title: DISPLAY DEVICE AND RECORDING MEDIUM
Attorney Docket: 9319T-000219

Commissioner of Patents and Trademarks
Washington, D.C. 20231

PRELIMINARY AMENDMENT AND PETITION FOR EXTENSION OF TIME

Sir:

In response to the Notice to File Missing Parts mailed July 25, 2001, please amend the application as follows and consider the remarks set forth below.

Applicant hereby petitions under the provisions of 37 C.F.R. § 1.136(a) for a 2 month extension of time in which to respond to the outstanding Notice to File Missing Parts. Applicant has included a Fee Transmittal with this response for such extension of time.

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IN THE SPECIFICATION

Please replace the following paragraphs of the specification. Applicant includes herewith an Attachment for Specification Amendments showing a marked up version of each replacement paragraph.

[Page 34, line 8] Furthermore, the present invention provides the creation of a novel technology of applying a prescribed voltage for retaining the image by maintaining the distribution state of the electrophoretic material in order to prevent the electrophoretic material of the recording medium after voltage application from scattering in the recording medium and not being able to maintain the image. The entire disclosure of Japanese Patent Application 2000-157050, filed May 29, 2000, is herein incorporated by reference.

IN THE CLAIMS

Please amend the claims in accordance with the following rewritten claims in clean form. Applicant includes herewith an Attachment for Claim Amendments showing a marked up version of each amended claim.

3. (Amended) A display device according to claim 1, further comprising a plurality of scanning electrodes and data electrodes for applying voltage to said particles in pixel units.

4. (Amended) A display device according to claim 1, further comprising a plurality of scanning lines and data lines for applying voltage independently in pixel units to said particles.

13. (Amended) A display device according to claim 11, wherein said driver is a data driver to be connected to the data line of the pixel unit of said switching element and a scanner driver to be connected to the scan line of the pixel unit thereof.

14. (Amended) A display device according to claim 11, wherein said data writing is conducted by only selecting and rewriting pixels for rewriting data.

19. (Amended) A display device according to claim 17, further comprising gradient setting means for controlling the gradient by controlling one or both of the value/time of the voltage to be applied with said data writing circuit.

20. (Amended) A display device according to claim 9, wherein said switching element is a low-temperature poly-Si TFT.

21. (Amended) A display device according to claim 9, wherein said switching element is of a structure wherein the channel portion is at least formed of an organic film.

22. (Amended) A display device according to claim 9, wherein said refresh circuit comprises a circuit for reapplying voltage based on the data of each of said pixels in prescribed intervals in order to substantially maintain the distribution state of the particles which moved pursuant to the voltage applied based on the data of each of said pixels.

25. (Amended) A recording medium according to claim 23, wherein said particles are contained in a microcapsule together with liquid for dispersing said particles.

26. (Amended) A recording medium according to claim 23, wherein said single pixel is structured of a plurality of sub pixels, and gradation is controlled by pulse-surface-area modulation.

27. (Amended) A recording medium according to claim 23, wherein said particles are formed of a plurality of types of charged particles with differing quantities of electric charge.

REMARKS

The purpose of this Preliminary Amendment is to eliminate multiple dependent claims. Favorable consideration of this application is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: November 26, 2001

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ATTACHMENT FOR SPECIFICATION AMENDMENTS

The following is a marked up version of each amended paragraph in which underlines indicates insertions and brackets indicate deletions.

[Page 34, line 8] Furthermore, the present invention provides the creation of a novel technology of applying a prescribed voltage for retaining the image by maintaining the distribution state of the electrophoretic material in order to prevent the electrophoretic material of the recording medium after voltage application from scattering in the recording medium and not being able to maintain the image. The entire disclosure of Japanese Patent Application 2000-157050, filed May 29, 2000, is herein incorporated by reference.

ATTACHMENT FOR CLAIM AMENDMENTS

The following is a marked up version of each amended claim in which underlines indicates insertions and brackets indicate deletions.

3. (Amended) A display device according to claim 1 [or claim 2], further comprising a plurality of scanning electrodes and data electrodes for applying voltage to said particles in pixel units.

4. (Amended) A display device according to claim 1 [or claim 2], further comprising a plurality of scanning lines and data lines for applying voltage independently in pixel units to said particles.

13. (Amended) A display device according to claim 11 [or claim 12], wherein said driver is a data driver to be connected to the data line of the pixel unit of said switching element and a scanner driver to be connected to the scan line of the pixel unit thereof.

14. (Amended) A display device according to claim 11 [or claim 12], wherein said data writing is conducted by only selecting and rewriting pixels for rewriting data.

19. (Amended) A display device according to claim 17 [or claim 18], further comprising gradient setting means for controlling the gradient by controlling one or both of the value/time of the voltage to be applied with said data writing circuit.

20. (Amended) A display device according to [any one of claims] claim 9 [to 19], wherein said switching element is a low-temperature poly-Si TFT.

21. (Amended) A display device according to [any one of claims] claim 9 [to 20], wherein said switching element is of a structure wherein the channel portion is at least formed of an organic film.

22. (Amended) A display device according to claim 9 [or claim 10], wherein said refresh circuit comprises a circuit for reapplying voltage based on the data of each of said pixels in prescribed intervals in order to substantially maintain the distribution state of the particles which moved pursuant to the voltage applied based on the data of each of said pixels.

25. (Amended) A recording medium according to claim 23 [or claim 24], wherein said particles are contained in a microcapsule together with liquid for dispersing said particles.

26. (Amended) A recording medium according to to [any one of claims] claim 23 [to 25], wherein said single pixel is structured of a plurality of sub pixels, and gradation is controlled by pulse-surface-area modulation.

27. (Amended) A recording medium according to [any one of claims] claim 23 [to 26], wherein said particles are formed of a plurality of types of charged particles with differing quantities of electric charge.

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